Usefulness of plain abdominal radiography in stroke patients with bowel dysfunction

M.C. Joo

Wonkwang University School of Medicine and Hospital, Iksan, South Korea

Keywords: Bowel dysfunction; Stroke; Plain abdominal radiography; Colon transit time

Objective.– To evaluate the usefulness of the plain abdominal radiography as a diagnostic value of bowel dysfunction in stroke patients.

Method.– A total of fifty nine stroke patients were recruited. Patients were interviewed about the clinical information, constipation score and Bristol stool form scale. The total and segmental colon transit time (CTT) were measured by using radio-opaque markers. The degree of stool retention was evaluated by the plain abdominal radiography and were scored by two different methods, such as Starreveld score and Leech score. For each bowel segment stool stasis is scored as 0, 1, 2, 3. We examined the relationship between the clinical aspects, CTT and the degree of stool retention of plain abdominal radiography.

Results.– Constipation scores ranged from 1 to 11, average 4.59 ± 2.16 and Bristol stool form scale ranged from 1 to 6, average 3.86 ± 1.13. There were statistically significant correlations between the total CTT and constipation score.

Conclusion.– Plain abdominal radiography was a simple and convenient method as a evaluation method of the bowel dysfunction in stroke patients.

http://dx.doi.org/10.1016/j.rehab.2014.03.080

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Brain areas for thalamic pain. A preliminary brain F-18 FDG PET study

Y.W. Kim [a], J.Y. Kim [a,*], Y.S. An [b]

[a] *Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, South Korea*

[b] *Department of Nuclear Medicine, Ajou University School of Medicine, South Korea*

*Corresponding author.

Keywords: Central post-stroke pain; Thalamic stroke; Brain metabolism

Introduction.– Central post-stroke pain (CPSP) is one of the most refractory pain syndromes following stroke. However, the pathogenic mechanism has not been clearly clarified. In this study, we aimed to elucidate the underlying mechanism for CPSP by investigating the brain metabolism in patients with CPSP after thalamic stroke (TSt).

Materials and methods.– Eight patients with CPSP after TSt were enrolled in this study. We measured brain metabolism by F-18 FDG PET and the pain severity by VAS. Statistical analysis of brain metabolism for all patients was performed by SPM2 compared to 15 healthy controls. Additionally, we investigated the brain area correlated with the pain severity using covariate analysis.

Results.– SPM analysis showed that decreased brain metabolism was in left anterior cingulum, right insula, right superior temporal cortex, both cerebellum and increased brain metabolism was in left orbitofrontal, right superior temporal, right calcarine, both inferior temporal cortices in patients with CPSP. The severity of CPSP was correlated with the brain metabolism of right precentral, right superior parietal cortices.

Discussion.– Our findings suggested that brain area in anterior cingulum, insula, orbitofrontal gyrus which are parts of neural network for affective pain processing, may be relevant structure for underlying mechanism of CPSP after TSt.

http://dx.doi.org/10.1016/j.rehab.2014.03.081

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Activity level of post-stroke patients when leaving the PRM department

J.Y. Salle , S. Mandigout

Laboratoire HAVAE, Limoges, France

*Corresponding author.

Keywords: Stroke; Activity; Recommendations; Sensor

Objective.– To evaluate the daily activity of stroke patients to determine if they meet the 30 minutes of moderate daily activity recommended by the HAS [1], preferably by performing sessions of 10 consecutives minutes [2].

Methods.– The activity level of 15 walking subjects (mean age: 64.7 ± 18.1 years, Barthel Index (BI): 85.2 ± 13.1/100, stroke time: 36.5 ± 22.5 days) was estimated using a sensor armband SenseWear (BodyMedia) carried two consecutive days during the period of rehabilitation (9am to 4:30pm).

Results.– In all patients, the mean was 38.0 ± 33.3 minutes of moderate activity daily, on average activity sessions of 4.2 ± 5.3 minutes. However on a case-by-case, 5 patients (mean age: 59.4 ± 21.8 years, IB: 83.1 ± 16.7/100, stroke time: 29.0 ± 22.4 days) did not meet the recommendations and conducted an average of 5.8 ± 4.4 minutes daily moderate activity.

Discussion.– This study shows that two out of three patients reach the recommendations when leaving the PRM department. However they fail to comply with sessions of 10 consecutives minutes.

References

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http://dx.doi.org/10.1016/j.rehab.2014.03.082

P428-e

Upper-limb recovery after stroke for patients during rehabilitation

E. Milinaviciene *, L. Varzaityte , A. Krisciunas , A. Zymanciute

Department of Rehabilitation, Lithuanian University of Health Sciences, Kaunas, Lithuania

*Corresponding author.

Keywords: Stroke; Rehabilitation; Mobility

Introduction.– Majority of stroke patients (pts) have upper-limb dysfunction [1].The aim of this study was to evaluate recovery of hand function in stroke patients during rehabilitation.

Material and methods.– Study sample was 24 pts, 12 pts were with right hemispheric stroke, 12 pts – with left hemispheric stroke, who underwent the multidisciplinary rehabilitation. Rehabilitation effectiveness was evaluated by Functional Independence Measure test (FIM), the muscles strength – by dynamometer and Lovett test.

Results and discussion.– The change of FIM score was 30 ± 3.1 points, $P < 0{,}001$: I group – 29.6 ± 4.8 and II group – 30.4 ± 4 points ($P = 0.7$). The improvement of muscles strength of paralytic hand was: wrist flexors – 0.8 ± 0.2, wrist extensors – 0.8 ± 0.2, digiti-flexors – 0.9 ± 0.2, digiti-extensors – 0.7 ± 0.2, digiti-adductors – 0.8 ± 0.2 points ($P < 0{,}05$). The change of muscles strength of paralytic hand was 2.9 ± 0.8 kg ($P < 0.05$): I group – 2.9 ± 1 kg and II group – 2.8 ± 1.2 kg, ($P = 0.9$). The upper-limb function for stroke pts during rehabilitation get better ($P < 0.05$), the side of stroke location in the brain has no statistically significant findings.

Reference

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http://dx.doi.org/10.1016/j.rehab.2014.03.083

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Resumption of driving after a stroke, descriptive study

A.C. Farasse [a,*], A. Desvergee [a], A. Ruet [b], F. Leroy [a]

[a] *CHU de Caen, Caen, France*